Parts and Accessories.
Installation Instructions.

DVD Navigation System Retrofit with On-Board Monitor
BMW 5 Series Touring (E39/2)

These installation instructions are only valid for cars with SA 555 (on-board computer) and without SA 358 climate comfort windscreen

Retrofit kit No.: 65 90 0 303 578

Installation time
The installation time is 6.5 hours, but this may vary depending on the condition of the car and the equipment in it.

Important information
These installation instructions are primarily designed for use within the BMW dealership organisation and by authorised BMW service companies;

In any event the target group for these installation instructions is specialist personnel trained on BMW cars with the appropriate specialist knowledge.

All work must be completed using the latest BMW repair manuals, circuit diagrams, servicing manuals and work instructions in a rational order using the prescribed tools (special tools) and observing current health and safety regulations.

Ensure that the cables/lines are not kinked or damaged as you install them in the car. The costs incurred as a result of this will not be reimbursed by the BMW Group.

Additional cables/lines that you install must be secured with cable ties.

If the specified PIN chambers are occupied, bridges, double crimps or twin-lead terminals must be used.

After the installation work the retrofit kit must be coded using DISPlus, MoDiCIII or GT-1 via the **Retrofit** path.

All the figures show LHD cars, proceed accordingly on RHD cars.

Do not archive the hard copy of these installation instructions since daily updates are made by Aftersales Portal.

Subject to technical modifications.

Pictograms:

▷ denotes instructions that draw your attention to special features. ◂

◂ denotes the end of the instruction or caution text. ◂

See the EBA CD or Aftersales Portal for explanations of the pictograms.

Ordering instructions
The radio adapter cable and the CD changer adapter cable do not form part of the retrofit kit and must be ordered separately for cars built before 09/00 (see EPC for documentation and part numbers).

In cars built before 09/00, the aerial amplifier must be exchanged with an aerial amplifier for cars built from 09/00 onwards. This aerial amplifier does not form part of the retrofit kit and must be ordered separately for cars built before 09/00 (see EPC for documentation and part numbers).

Special tools required
Radio puller (65 1 100)

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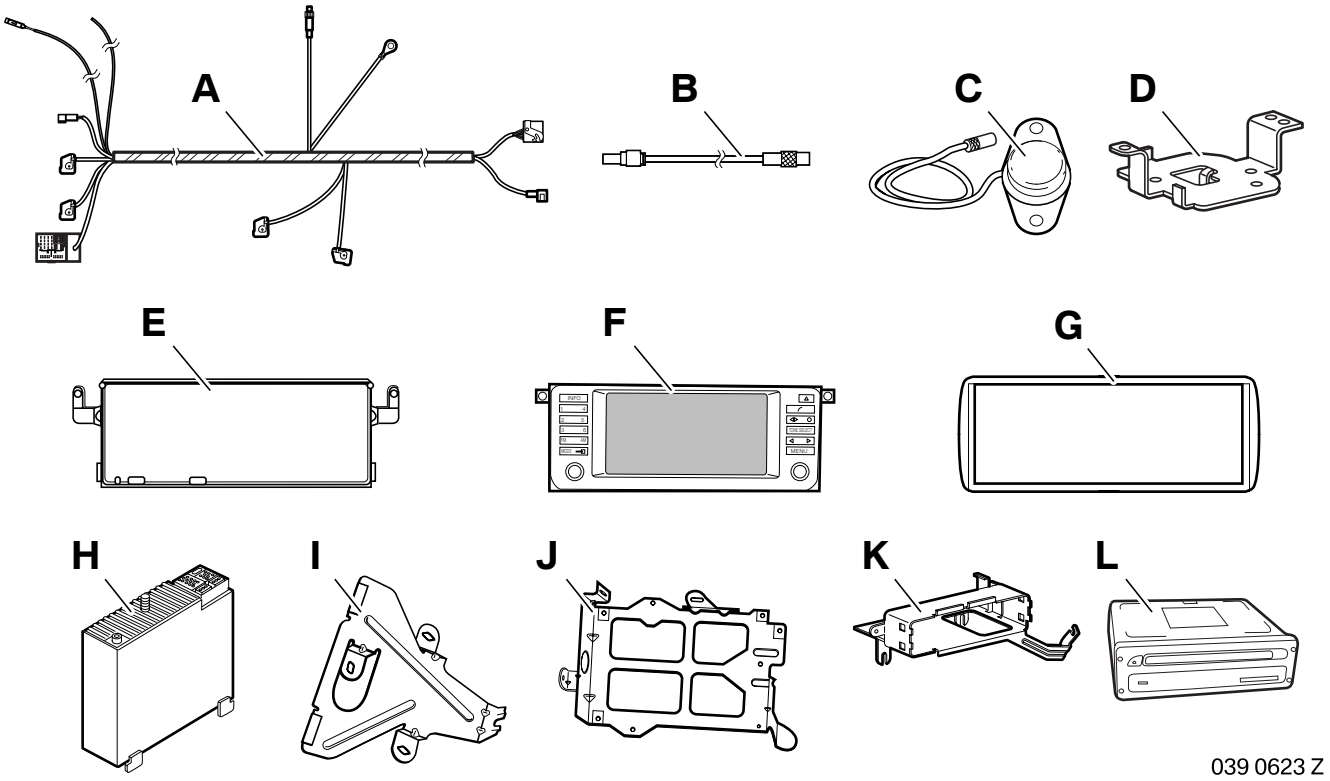
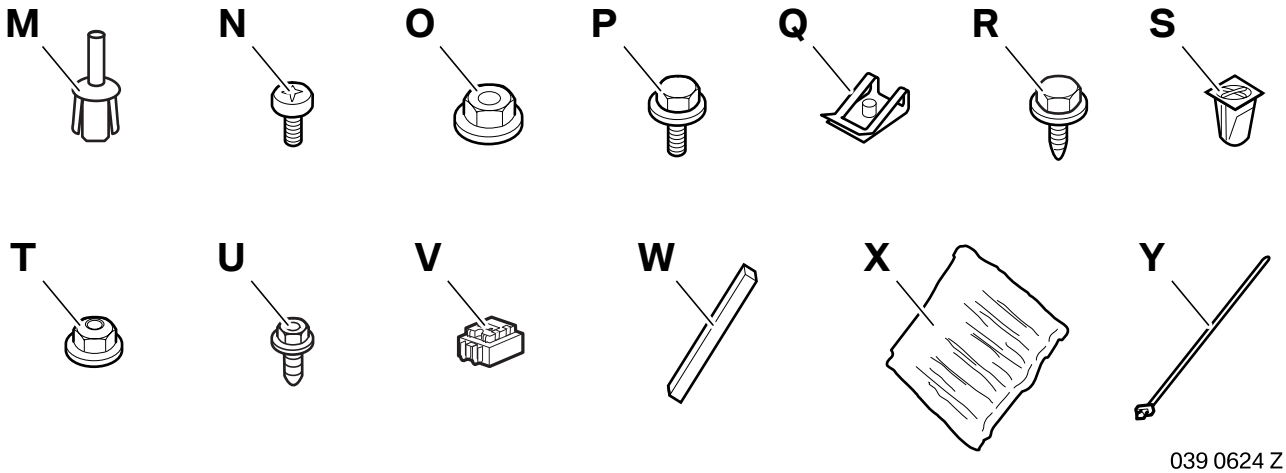
1. Parts list



Legend

A	Navigation system retrofit wiring harness
B	GPS aerial cable
C	GPS aerial
D	Holder for GPS aerial
E	On-board monitor module holder
F	On-board monitor
G	Frame
H	On-board monitor radio
I	Holder for on-board monitor radio
J	Base holder
K	Navigation computer holder
L	Navigation computer

1. Parts list



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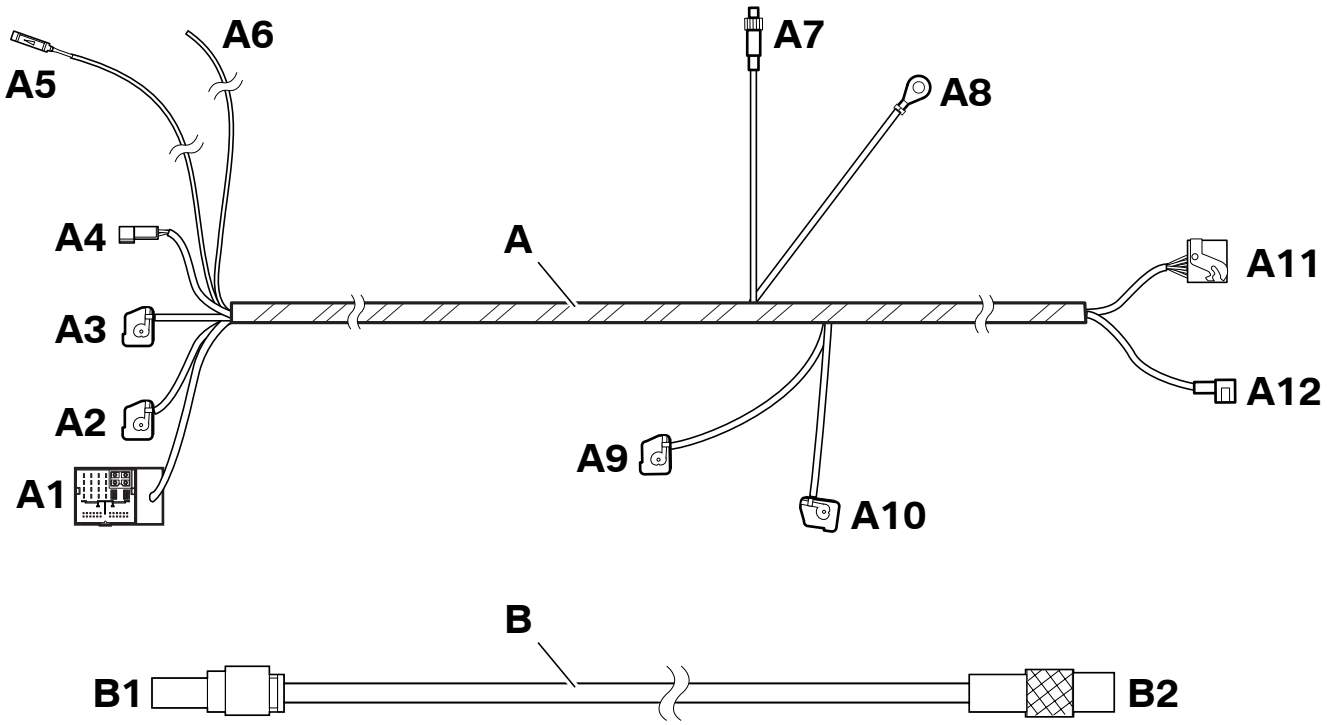
Legend

M	Expanding rivet (2x)
N	Fillister head screw M3 x 8 (4x)
O	Hexagonal nut with washer M5
P	Hexagonal screw with washer M5 x 14 (2x)
Q	Speed nut M5 (2x)
R	Self-tapping screw with washer St 4.8 x 16 (2x)
S	Expanding nut (2x)
T	Cap nut M5 (5x)
U	Plastic hexagonal screw (2x)
V	Miniature connector (2x)
W	Sealing strip (2x)
X	Protective strip (3x)
Y	Cable tie 200 x 3.6 mm (20x)

2. Preparations

	TIS No.
⚠ Refer to the safety instructions for handling components of the airbag system. ◂	32 34 ...
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00 ...
The following components must be removed first of all	
Décor strips on instrument panel trim right and centre left	51 45 030
Décor strips on instrument panel trim above glove compartment	51 16 221
Radio receiver (no longer required)	65 11 030
Multi information display (no longer required)	65 81 010
Side carpet of centre console left and right	51 16 200
Instrument holder complete	62 21 000
Front left seat	52 14 000
Handbrake lever cover	---
Undo the trim for the bottom section of the instrument panel	51 45 030
Undo the trim for the top section of the instrument panel	51 45 050
Exchange the radio module holder with on-board monitor module holder **E**	51 45 031
Passenger airbag	---
Rear seat bench	52 26 005
Left side backrest section on rear seat backrest	52 26 008
Door sill strips left front and rear	51 47 000
Bottom part of the B pillar trim left	51 43 150
Raise the carpet at the left	---
Pedal trim (LHD cars only)	51 45 181
A pillar trim bottom right (LHD cars only)	51 43 075
Side carpet on centre console front right (LHD cars only)	51 16 200
Glove compartment (RHD cars only)	51 16 360
Footwell trim left (RHD cars only)	51 45 181
A pillar trim bottom left (RHD cars only)	51 43 075
C pillar trim left	51 43 172
D pillar trim left	51 43 252
Boot floor trim front	51 47 131
Left boot – wheel arch trim	51 47 151

3. Connection diagram



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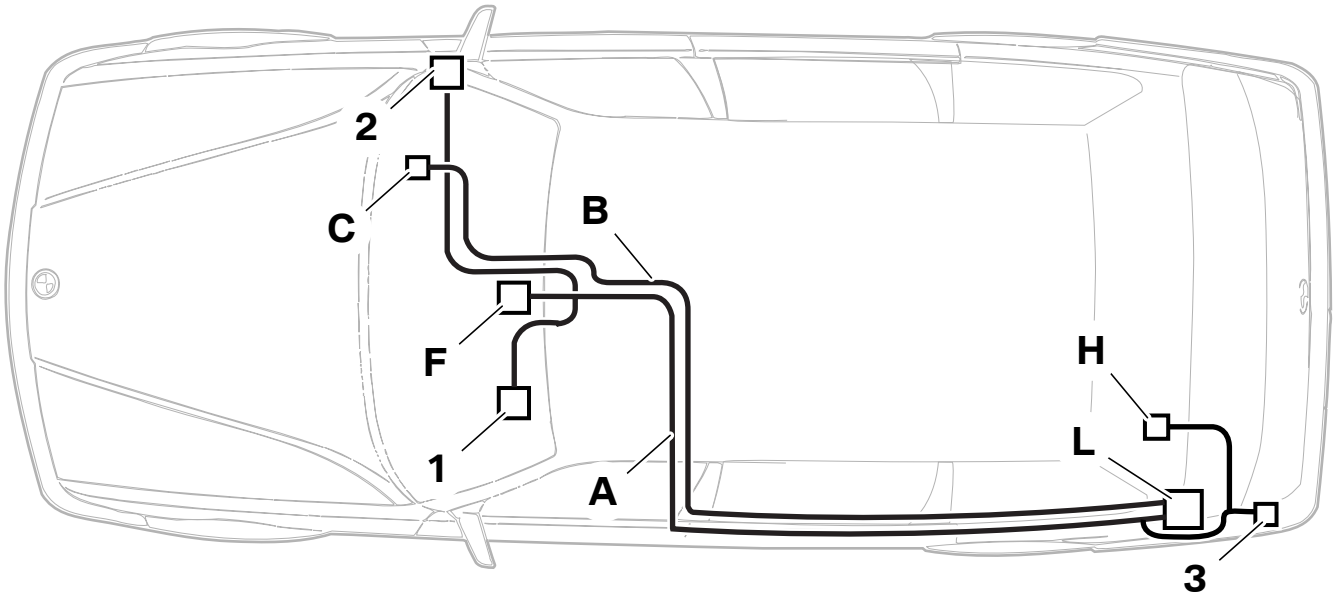
Item	Description	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Navigation system retrofit wiring harness	---	---	---	---
A1	Black circuit board plug	---	---	To radio plug front	X18126
A2	Blue 12-pin socket casing	---	---	To on-board monitor **A196**	X18801
A3	White 12-pin socket casing	---	---	To on-board monitor **A196**	X18802
A4	Black 3-pin socket casing	AUX		For optional AUX connection retrofit	X14118
A5	Socket contact	Reversing signal	BL/GE 0.35 mm²	To black 54-pin plug of light module **A3**, on the A pillar at the bottom on the passenger side	X10117 PIN 38
A6	Cable open	DFAHR	BR/RT 0.35 mm²	With miniature connector to the brown/red line of blue 26-pin plug X10114 of the instrument cluster	X11359 PIN 1
A7	Coaxial plug casing	---	---	To aerial amplifier **A421** on the left-hand D pillar	X13344
A8	Cable eyelet	TI. 31	BR 2.5 mm²	To earth post connection on the left-hand D pillar	X13016
A9	Violet 18-pin socket casing	---	---	To navigation computer **A112**	X1312
A10	Blue 18-pin socket casing	---	---	To navigation computer **A112**	X1313
A11	Black socket connector	---	---	To on-board monitor radio **N9**	X18126
A12	Black Fakra socket casing	---	---	To on-board monitor radio **N9**	X13342
B	GPS aerial cable	---	---	---	---
B1	Coaxial plug casing	---	---	To GPS aerial below instrument panel on right	---
B2	Coaxial socket casing	---	---	To navigation computer **A112**	---

4. Installation and cabling diagram



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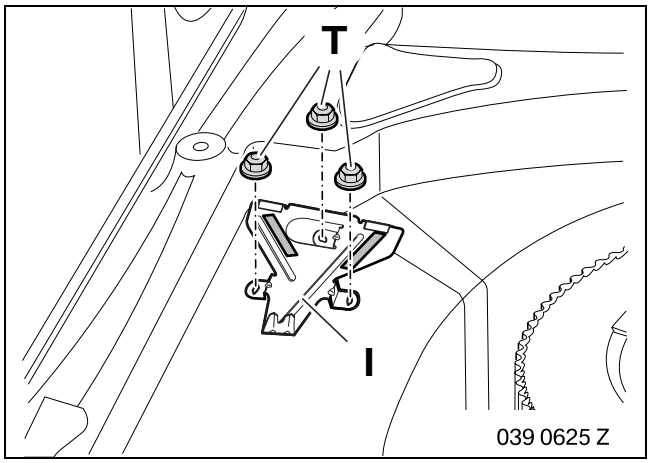
Legend

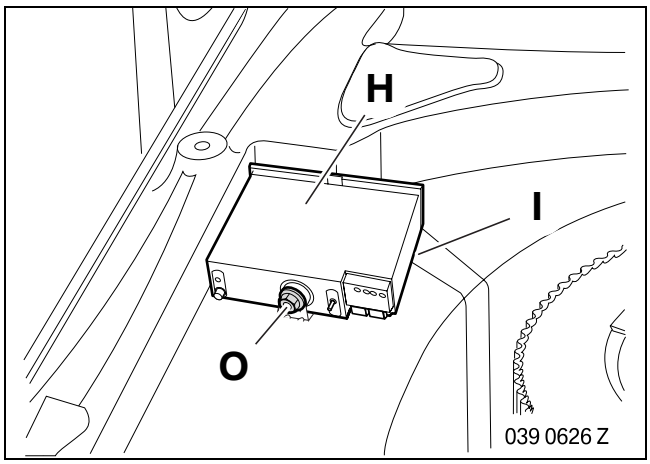
A Navigation system retrofit wiring harness
B GPS aerial cable
C GPS aerial
F On-board monitor
H On-board monitor radio
L Navigation computer

1 Instrument cluster
2 Light module
3 Aerial amplifier and earth post connection **X13016**

5. To install the on-board monitor radio

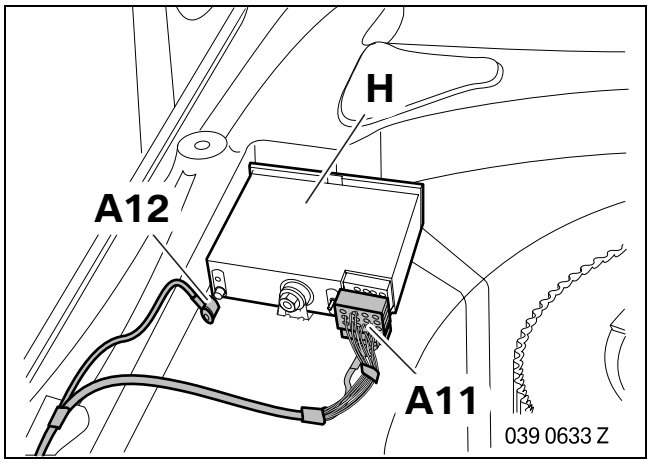


Use cap nuts **T** to screw on-board monitor radio holder **I** onto the boot floor at the left.

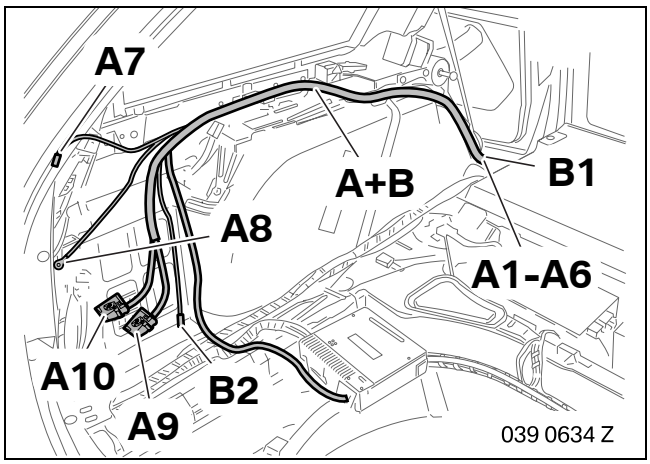


Insert on-board monitor radio **H** into on-board monitor radio holder **I** and use hexagonal nut **O** to screw it on.

6. To install and connect the navigation system retrofit wiring harness

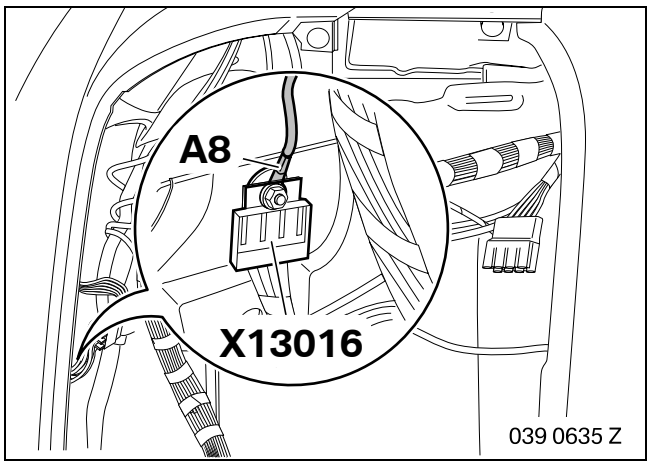


Connect branches **A11** and **A12** to on-board monitor radio **H**.

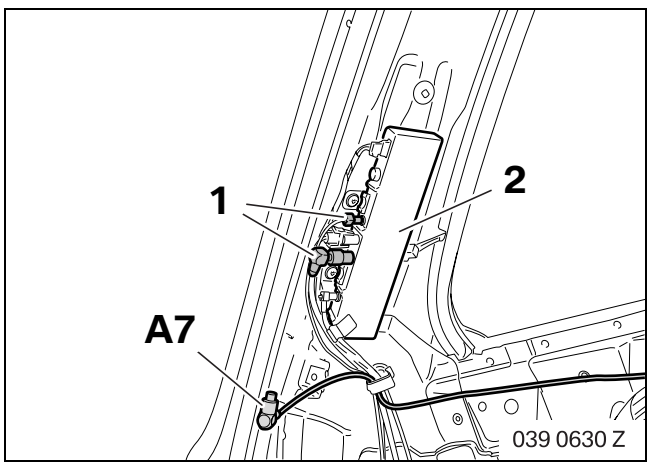


Route navigation system retrofit wiring harness **A** and GPS aerial cable **B** along the standard wiring harness as follows:

- Branches **A9**, **A10** and **B2** to the installation site of the navigation computer
- Branches **A7** and **A8** to the D pillar on the left
- Branches **A1** – **A6** and **B1** to the front



Screw branch **A8** to earth post **X13016**.



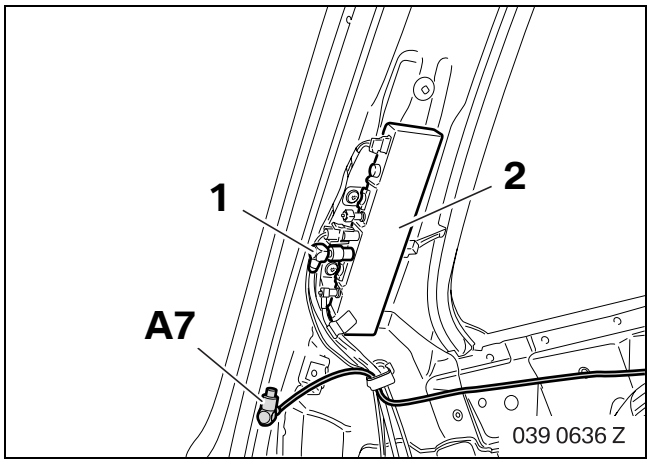
Cars built before 09/00 only

Unfasten the aerial cables (1) from the aerial amplifier (2) and tie them back.

Exchange the aerial amplifier (2) for the version after 09/00.

Connect branch **A7** to the aerial amplifier (2).

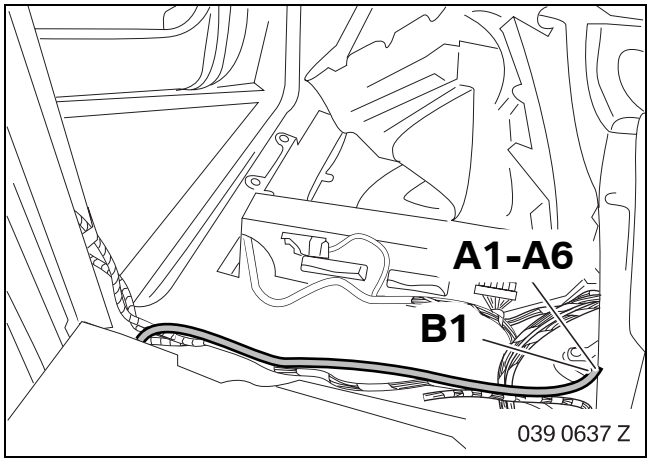
6. To install and connect the navigation system retrofit wiring harness



Cars built after 09/00 only

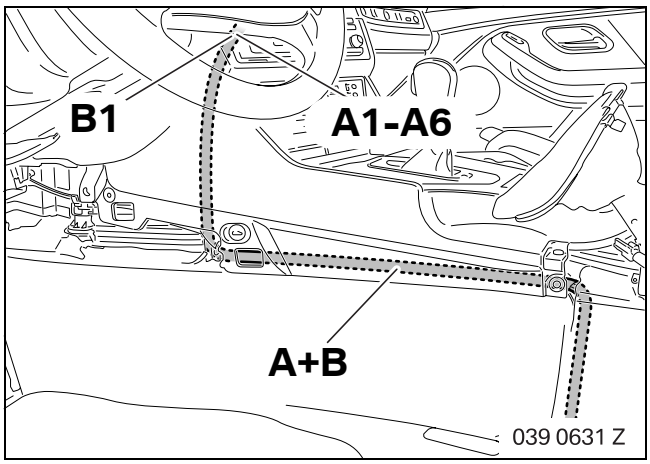
Unfasten the aerial cable (1) from the aerial amplifier (2) and tie it back.

Connect branch **A7** to the aerial amplifier (2).



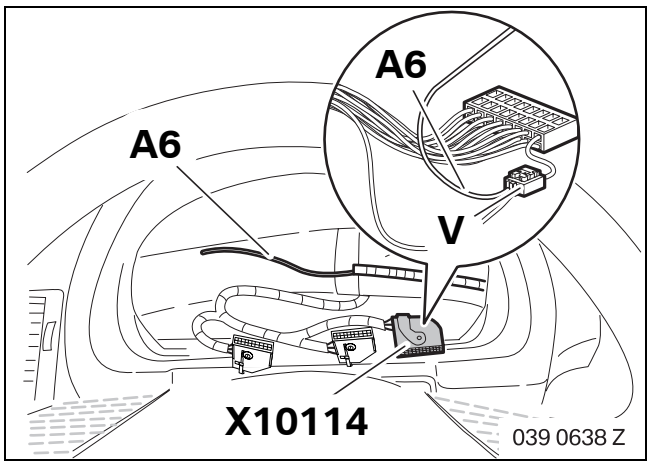
All cars

Route branches **A1** – **A6** and **B1** along the standard wiring harness to the centre console.



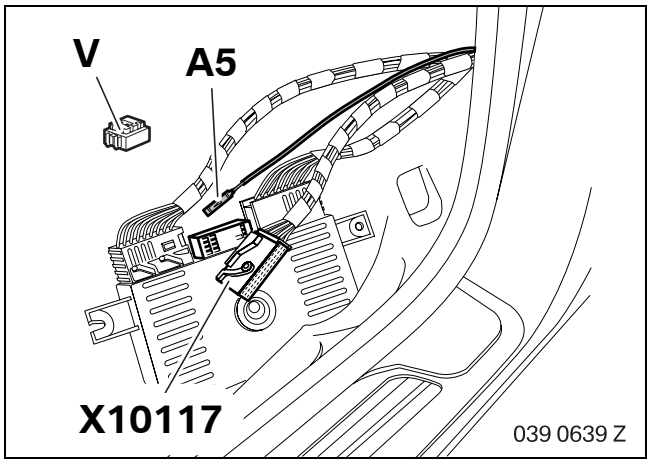
Route navigation system retrofit wiring harness **A** and GPS aerial cable **B** along the standard wiring harness below the centre console as follows:

- Branches **A1** – **A4** to the installation site of the on-board monitor
- Branch **A5** to the light module
- Branch **A6** to the instrument cluster
- Branch **B1** towards the passenger airbag



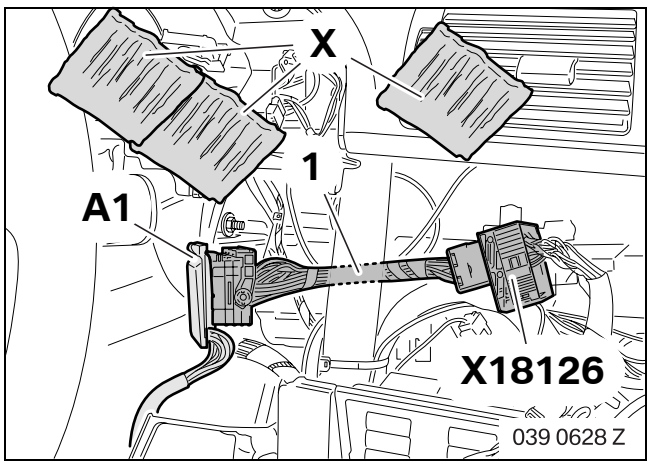
Use miniature connector **V** to connect branch **A6** to the brown/red line on blue 26-pin plug **X10114** PIN 1.

6. To install and connect the navigation system retrofit wiring harness



Connect branch **A5** to PIN 38 of black 54-pin plug **X10117**.

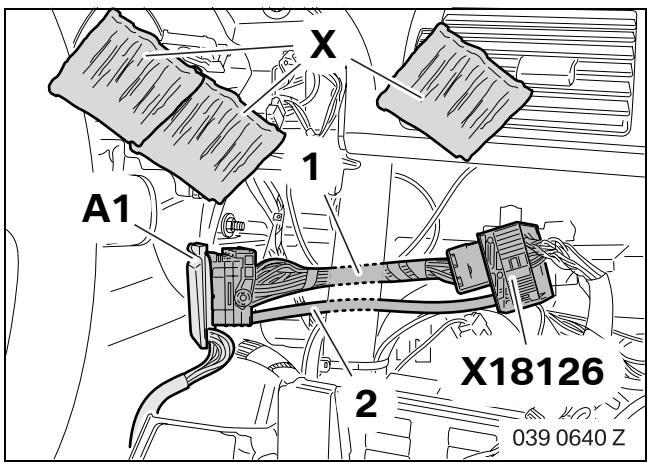
If PIN 38 is already occupied, cut the socket contact off branch **A5** and use miniature connector **V** to connect it to the blue/yellow line.



Cars built up to 09/00 without CD changer only

Connect the radio adapter cable (1) between branch **A1** and radio plug **X18126**.

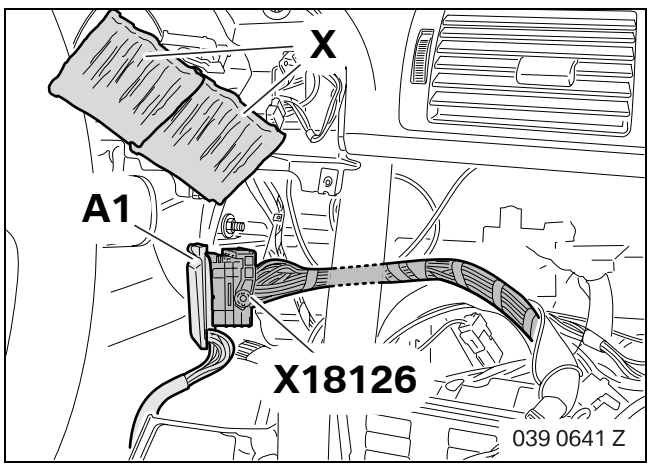
Wrap the plug connector in 3 protective strips **X**.



Cars built up to 09/00 with CD changer only

Connect the radio adapter cable (1) and CD changer adapter cable (2) between branch **A1** and radio plug **X18126**.

Wrap the plug connector in 3 protective strips **X**.

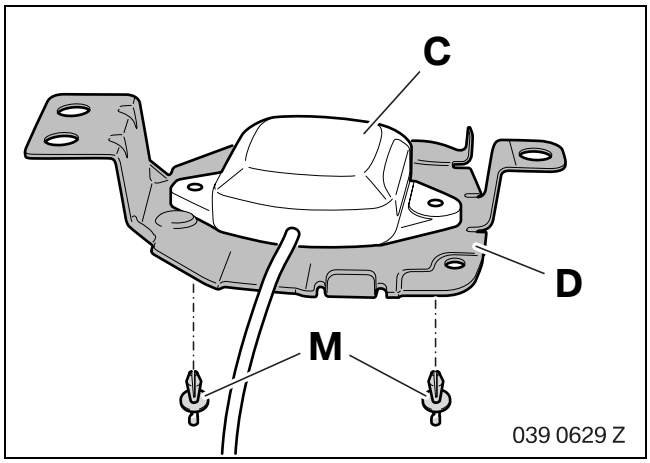


Cars built after 09/00 only

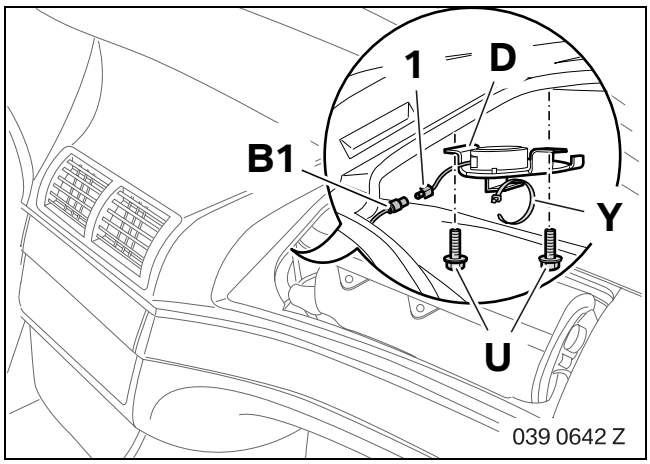
Connect branch **A1** to radio plug **X18126**.

Wrap the plug connector in 2 protective strips **X**.

7. To install the GPS aerial



Use expanding rivets **M** to screw GPS aerial **C** onto GPS aerial holder **D**.

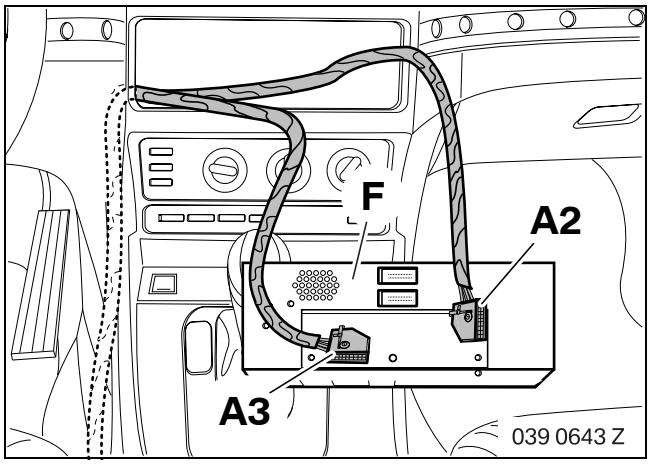


Use plastic hexagonal screws **U** to screw GPS aerial holder **D** onto the instrument panel from below.

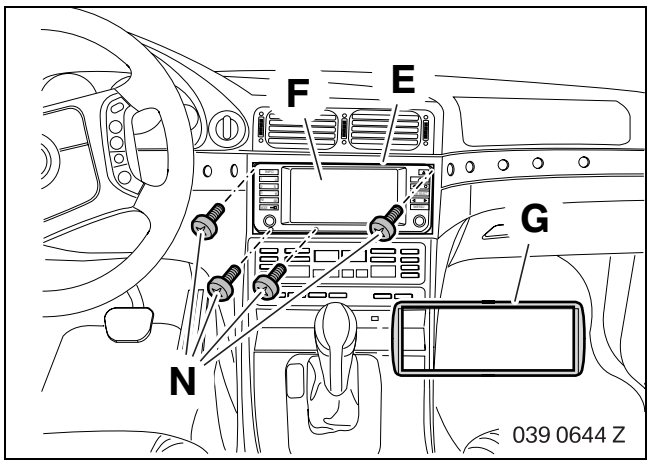
Connect aerial cable (1) of the GPS aerial to branch **B1**.

Use cable tie **Y** to secure the plug connector onto GPS aerial holder **D**.

8. To install the on-board monitor



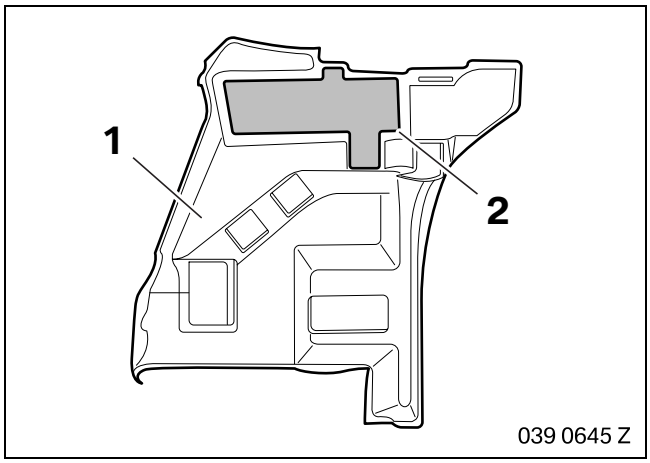
Connect branches **A2** and **A3** to on-board monitor **F**.



Use fillister head screws **N** to screw on-board monitor **F** onto on-board monitor module holder **E**.

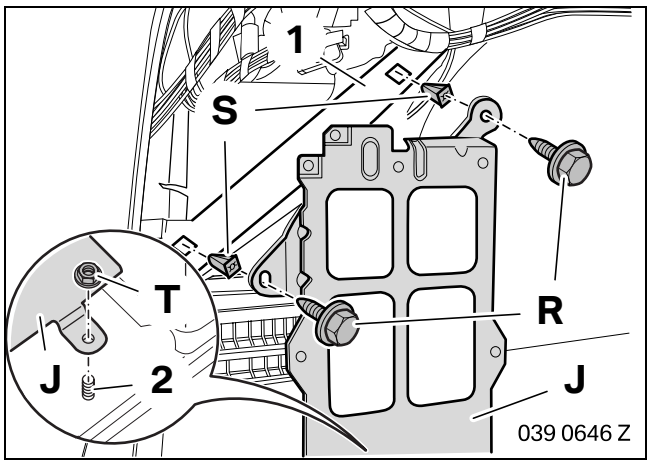
Plug frame **G** onto on-board monitor **F**.

9. To install the navigation computer



Cars without base holder only

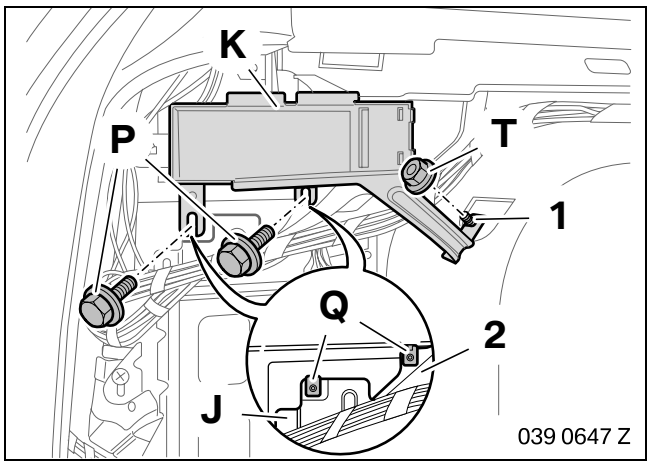
Cut out the insulating mat (1) in the boot on the left along the marked edge (2).



Insert expanding nuts **S** into the cross strut (1) in the boot on the left.

Use self-tapping screws **R** to screw base support system **J** onto the cross strut (1).

Use cap nut **T** to screw base support system **J** onto the stud (2) on the boot floor.

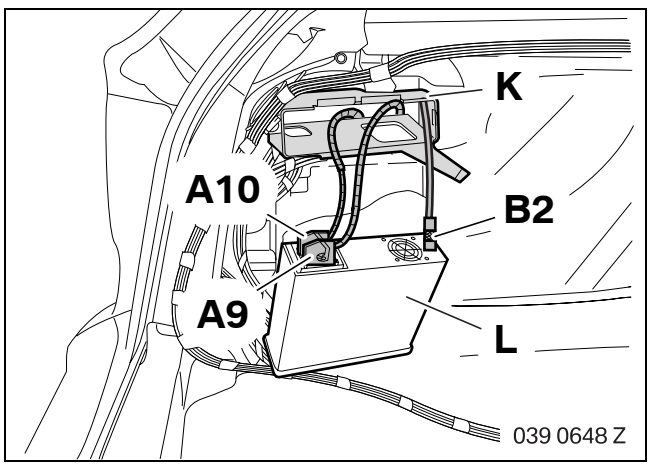


All cars

Push speed nuts **Q** onto base support system **J** and the cross strut (2).

Use hexagonal nut **T** to screw navigation computer holder **T** onto the stud (1) on the rear left wheel arch.

Use hexagonal screws **P** to screw navigation computer holder **K** onto base support system **J** and the cross strut (2).



Connect branches **A9**, **A10** and **B2** to navigation computer **L**.

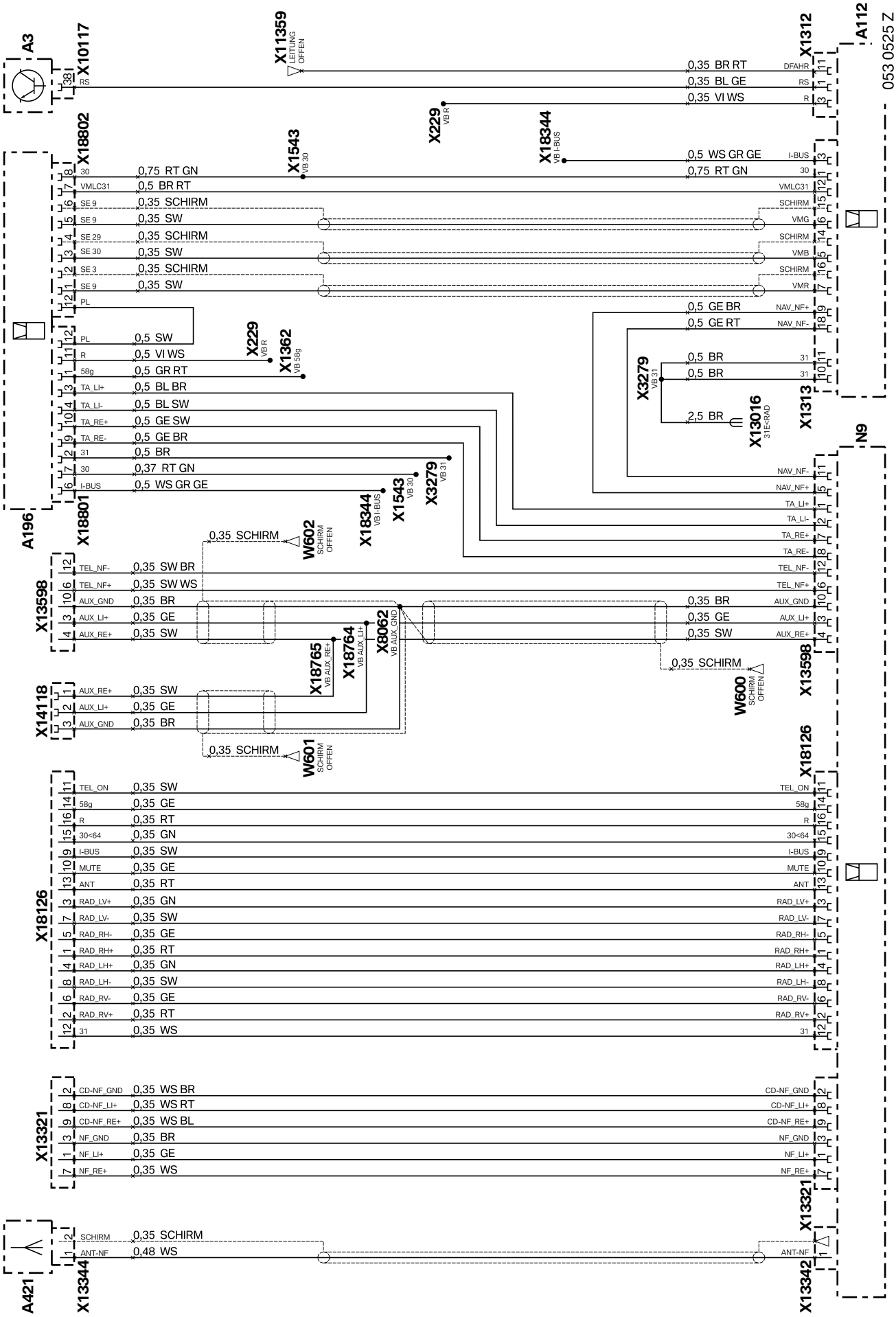
Push navigation computer **L** into navigation computer holder **K** until it clips into place.

10. Concluding work and coding

Do not insert the software CD into the navigation computer until prompted to do so during the coding procedure (risk of damaging the navigation computer). ◂

- Connect the battery
- Code the retrofit using DISPlus, MoDiC III or GT-1 via path **Retrofit**
- In cars with a DSP amplifier, re-code this as well
- Conduct a brief test
- Conduct a function test
- Re-assemble the car

11. Circuit diagram



11. Circuit diagram

Legend

A3	Light module
A112	Navigation computer
A196	On-board monitor
A421	Aerial booster
N9	On-board monitor radio
W600	Screen open
W601	Screen open
W602	Screen open
X229	Terminal R connector
X1312	Violet 18-pin plug, navigation computer
X1313	Blue 18-pin plug, navigation computer
X1362	58g connector
X1543	Terminal 30 connector
X3279	Terminal 31 connector
X8062	Screen solder connector
X10117	Black 54-pin plug, light module
X11359	Cable open
X13016	Earth, stereo/Hi Fi
X13321	Radio III
X13342	Aerial Radio LF
X13344	Aerial Diversity LF
X13598	Radio IV
X14118	Black 3-pin plug, AUX preparation
X18126	Radio plug
X18344	I bus connector
X18764	AUX LI+ connector
X18765	AUX RE+ connector
X18801	Blue 12-pin plug, on-board monitor
X18802	White 12-pin plug, on-board monitor

Cable colours

BL	Blue	RT	Red
BR	Brown	SW	Black
GE	Yellow	VI	Violet
GN	Green	WS	White
GR	Grey		